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SUBJECT Evaluation of USSR Petrochemical Research

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REPORT NO.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES, WITHIN THE MEANING OF TITLE 18, SECTIONS 793 AND 794, OF THE U.S. CODE, AS AMENDED. ITS TRANSMISSION OR REVELATION OF ITS CONTENTS TO OR RECEIPT BY AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. THE REPRODUCTION OF THIS REPORT IS PROHIBITED.

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There follow evaluations of USSR technical articles studied by members of research organizations:

1. A New Type of Reaction of Linear Polycondensation Arylation.  
VV Korshak and GS Koles (DI Mendeleev Chem Technol Inst, Moscow)  
Doklady Akad. Nauk, SSSR, 70, 625-7 (1950)

The technical content is excellent and up-to-date research work is indicated. The translation, however, is poorer than similar articles published in English.

2. Dealkylation of Isopropylbenzene over an Aluminum Silicate Catalyst.  
RD Cholentsev and NN Grayarov (Saratov State Univ)  
Doklady Akad. Nauk, SSSR, 173, 1214 (1956)

The technical content is good and up-to-date research work is indicated. The article is equal to similar articles published in English. The main deficiency in the article is the lack of experimental details and technique.

3. Preparation of Phosphorous Organic Compounds by the Reaction of Phosphorous Trichloride and Oxygen with Hydrocarbons, Their Chloro-Derivatives and with Ethers.  
LZ Soborovskii, Yu M Zinov'ev, and MA Englin  
Doklady Akad. Nauk, SSSR, 73, 333-5 (1980)

The translation of the article showed the technical content to be good, research work up-to-date and the paper to be equal to similar articles published in English.

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the convenience of the original office through the Maritime Division of the Office of Collection and Dissemination, OPA.

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4. The Mechanism of Polymerization of Propylene and the Structure of Its Dimers and Trimers.

LI Autaus and AD Petrov (DI Mendeleev Chem. Technol Inst, Moscow)  
Izvestiya Akad Nauk SSSR of the Akad of Science, SSSR, No 6, 599-607  
(1950)

The article was vague and did not follow the title and was very disappointing. The technical content was poor, the research reported was not up-to-date, and it was poorer than similar articles published in English.

5. Alkylation of Some Aromatic Hydrocarbons with Acetylene with the Aid of a Catalyst on the Basis of Boron Fluoride.

VL Vaizer  
Doklady Akad Nauk, 70, 621-4 (1950)

The technical work appeared to be good and to be up-to-date and the article equal to similar articles published in English. Russian articles are a good source of information for organic and physical organic subjects.

6. High Temperature Oxidation of Paraffin.

AK Plesov and AI Bykovets (Odessa Technol Inst)  
J Applied Chem, SSSR, 23, 1277-9 (1950)

The technical content of this article was fair, research work was not up-to-date as modern techniques were not evident, and the article was poorer than similar articles written in English. The impression gained from the translation was that Russian literature in organic chemistry is somewhat poorer than in other countries.

7. Oxidation of Paraffin Distillate.

AE Drabkin and ZV Solovetskikh (Leningrad Technol Inst, Leningrad)  
J Applied Chem, SSSR, 23, 1325-30 (1950)

The technical content was only fair, research reported was not up-to-date and in general was below the standard of like US and UK articles.

8. Study of the Process of Separation of Isomers of Xylene by an Adsorption Method.

TG Plashenov and IA Kuzin (under the direction of Prof EV Aleksandrov)  
J Applied Chem, SSSR, 24, No 4, 421-432 (1951)

The paper was good, reported up-to-date research work, was equal to similar articles from US and UK sources.

9. On the Problem of the Oxidation of Paraffinic Hydrocarbons.

AN Bashirov and Ya B Chertkov (MY Lomonosov State Univ, Moscow)  
Doklady Akad Nauk, SSSR, 78, 473-476 (1951)

The technical content was fair, research work reported was not up-to-date and it was poorer than like US and UK articles.

10. Study of the Composition of Fatty Acids from Oxidized Paraffin.

AE Drabkin and ZV Solovetskikh (Leningrad Technol Inst, Leningrad)  
J Applied Chem, 24, 302-308 (1951)

Same comments as in 9 above.

11. Conditions Stimulating the Formation of Carboxylic Acids During Oxidation of Kerosene Fractions.

VK Tsyakovskii and TSN Shcheglova  
J Applied Chem, SSSR, 24, 1084-1089 (1951)

Translation not of value and was, therefore, not appraised. Abstract of article was misleading due to difference in Russian and US terminology.

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12. Effect of Surface-Active Mixtures on the Crystallization of Normal Paraffins.  
NG Goldenberg and TP Zhurze (Inst. Phys. Chem. Acad. Sci.)  
Kolloidnyi Zhurnal, 13, 145-51 (1951)

The technical content of the paper was fair, up-to-date research was reported and was equal to similar US and UK articles.

13. On Steric Hindrances During Polymerization of 2,6-Dimethyl-4-Tert-Butylstyrene.  
VV Korshak and NG Matveeva (MI Mendeleev Chem-Tech Inst)  
Doklady Akad. Nauk, SSSR, 75, 1145-1148 (1951)

The technical content was good, up-to-date research reported, and the article was equal to similar US and UK articles.

14. Viscosity and Molecular Structure.  
GM Panchenkov (Inst. of Gen. and Inorganic Chem. NS Kiernakov)  
Doklady Akad. Nauk, SSSR, 80, 899-902 (1951)

The technical content was fair, up-to-date research work reported, and the article was not quite equal to like US and UK articles.

15. Plastic-Elastic Properties of Calcium-Containing Lubricants.  
GV Vinogradov and KR Klimov (Petroleum Inst, Acad. Sci., Moscow)  
Doklady Akad. Nauk, SSSR, 27, 911-914 (1947)

The technical information was fair, up-to-date research work reported, but the article appeared to be poorer than similar US and UK articles. The above statements should be qualified because a comparison between Russian and US publications in the field reported is hard. Very few other people are doing this kind of work. The ideas and methods have not found application with us.

16. On the Problem of the Synthesis of Antimony-Organic Compounds by the Method of Binary Diazonium Salts.  
OA Reutov and OA Pritsyna (MV Lomonosov State Univ, Moscow)  
Doklady Akad. Nauk, SSSR, 79, 819-821 (1951)

The article was excellent from technical standpoint, up-to-date research work reported, and was somewhat better than like US and UK publications. A recent publication indicates that Russians are leaders in metallo-organic compounds.

17. Catalytic Condensation of Alcohols with Ketones. I. Condensation of Methanol with Acetone.  
BN Dolgov and IN Samanovskaya (Leningrad Government Univ)  
J. Gen. Chem, SSSR, 22, 632-637 (1952)

The technical content was fair, up-to-date research reported, and was equal to similar US and UK articles.

18. Interaction of Alkoxysilanes with Some Chemical Compounds.  
AP Kreshkov (Mendeleev Chem-Tech Inst, Moscow)  
J. Applied Chem, SSSR, 23, 545-51 (1950)

The technical content was only fair, up-to-date research work was reported and the article was poorer than similar articles published in the US and UK.

19. From the Field of High Molecular Weight Compounds. XLVI. On the Polymerization of 2,6-Dimethyl-4-Tert-Butylstyrene.  
VV Korshak and NG Matveeva (Mendeleev Chem-Tech Inst, Moscow)  
J. Gen. Chem, SSSR, 22, 1173-1175 (1952)

The technical content was good, up-to-date research work was reported, and the paper was equal to like articles appearing in the US and the UK.

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20. Rules of Change in Volume During Blending of Hydrocarbons and Petroleum Fractions.

BV Ioffe (Saratov Government Inst)  
J Applied Chem, SSSR, 22, 1263-72 (1949)

The technical content was fair, up-to-date research work reported, and article was poorer than like US and UK articles.

21. On the Conversion of Secondary Nitro Compounds to the Oximes of the Corresponding Ketones.

SS Nametkin, GI Zyareva, and RA Krantsel (KA Timiryazev Plant Physiol Inst, Moscow)  
Doklady Akad Nauk, 72, 711-712 (1950)

Technical content good, up-to-date research work reported, but the lack of conclusive data in the experimental section made this article poorer than like US and UK articles.

22. n-Butylbenzene Peroxide.

KI Ivanov, VK Savinova, and VP Zhakhovskaya (All Soviet Heat Technical Inst, EE Dzerzhniskii)  
J Gen Chem, SSSR, 22, 781-784 (1952)

The technical content was good, up-to-date research work reported, and in general it was equal to like US and UK articles.

23. The adsorption Method of Measurement of the Surface of Platinum in Platinized Silica Gels.

GK Borenskov and AP Karnaukhov (Karpov Phys-Chem Inst, Moscow)  
Zhurnal Fiz Khim, 26, 1814-23 (1952)

Up-to-date research work was reported, technical content was good, and the article was equal to like US and UK articles.

24. Effect of Boron Fluoride on the Cracking of Hydrocarbons.

Ya M Paushkin and Ya S Lipalov (IM Gubkin Petrol Inst, Moscow)  
J Gen Chem, SSSR, 21, 1943 (1951) (English translation - Consultants Bureau)

This was obtained as an English translation. The journal was offered in English by the Consultants Bureau on a yearly subscription. The technical content was fair, up-to-date research work reported, and the article was poorer than like US and UK publications.

25. Oxidation of Paraffinic Hydrocarbons.

AN Bashkurov and Ya B Gherikov (Petroleum Inst Acad Sci, SSSR, Moscow)  
Doklady Akad Nauk, SSSR, 78, 473-6 (1951) RJ-83

Up-to-date research work was reported, but the technical content of the article was poor and it was poorer than like US and UK articles.

26. Preparation of Homo-Alkyl Derivatives of Diallylmalonate.

AV Topchisv, et al (IM Gubkin Petrol Inst, Moscow)  
Doklady Akad Nauk, SSSR, 84, 979-80 (1952) RJ-98

The technical content was good, up-to-date research work reported, and the article was equal to like US and UK articles. Most US articles make at least a pretext of having some object other than preparation of compounds. This article did not.

27. Poisoning of Platinum Catalysts Containing Small Amounts of Active Metal on the Carrier under Conditions of Dehydrogenation Catalysis.

Kh M Minachev, et al (Inst Org Chem Acad Sci, SSSR, Moscow)

The technical content was good, up-to-date research work reported, and it was equal

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